

Shade Policy

2017 - 2027

Boroondara is named from an Aboriginal word meaning “where the ground is thickly shaded”.

Responsible Directorate: Environment and Infrastructure
Authorised by: Council
Date of adoption: 11/12/2017
Review date: 2027
Policy type: Council

Table of contents

1. Introduction.....	3
1.1. Purpose	3
1.2. Scope	3
1.3. Corporate framework	3
2. Background.....	3
2.1. Benefits of shade	4
2.2. Use of shade	5
2.3. Types of Shade	6
2.4. Policy environment	7
2.1 Policy context	7
3. Policy statement.....	7
3.1. Guiding principles	8
4. Implementation and monitoring.....	9
4.1. Accountabilities	9
4.2. Implementation	9
4.3. Financial Implications	9
5. Definitions.....	10

1. Introduction

1.1. Purpose

Providing shade is important in contributing to the creation of comfortable and safe environments that encourage people outdoors and to have healthy active lifestyles. The purpose of the Shade Policy (Policy) is to outline Council's approach and to guide decision making in relation to the provision of shade within the public realm. The aim is to provide the Boroondara community with opportunities for shade, while at the same time encouraging the ongoing personal sun protection practices of the community.

1.2. Scope

The Shade Policy provides a framework for the provision of shade (natural and built) within the public realm.

The Policy will affect all users of public realm and applies to Council managed public spaces including parks, reserves, playgrounds, skate parks, civic spaces, car parks, unstructured recreation infrastructure, shared paths and walking routes along streets and into and around key destinations. The Policy does not cover Council owned facilities that are fenced or have restricted access i.e. swimming pools, tennis clubs, bowls clubs, kindergartens and childcare facilities etc.

1.3. Corporate framework

This Policy supports the strategic objective of The Boroondara Public Health and Wellbeing Plan 2013-2017 to 'enhance and develop our neighbourhoods to support health and wellbeing'. It also aligns with the Council Plan 2017-2021 key themes of:

- Sustainable environment - our natural and urban environment is improved in a sustainable way
- Quality facilities and assets - the community's current and future needs for assets and facilities are proactively managed.

This policy is also aligned with recommendations contained in the Boroondara Open Space Strategy 2013 (BOSS) and the Playground Development Strategy 2015.

2. Background

As our population grows there is increasing pressure on our parks, gardens and open spaces to meet the outdoor recreational needs and aspirations of our local community. Civic spaces, playgrounds, skate parks, shared paths and walking trails all play an important role in meeting these needs whilst making a positive contribution to the health and wellbeing of our residents. As temperatures rise and our awareness of the damaging effects of exposure to ultraviolet (UV) light and heatwaves increases, there is an opportunity to improve the way we provide much needed shade to key assets and facilities within the public realm.

There is increasing awareness of the benefits of shade to:

- reduce sun exposure and protect against UV radiation and skin cancer
- promote walking and healthy active lifestyles by creating more comfortable and cooler outdoor spaces in hotter weather
- make the city more resilient to heat-waves by using canopy trees to reduce urban temperatures.

2.1. Benefits of shade

2.1.1. Reducing sun exposure

'Sun exposure has been identified as the cause of around 99 percent of non-melanoma skin cancers and 95 percent of melanoma in Australia. Skin cancer is therefore one of the most preventable forms of cancer. Skin cancers account for around 83 percent of all new cancers diagnosed each year in Australia with at least one in every two Australians being diagnosed with skin cancer in their lifetime. Shade provides good protection from the sun and is easy for people to use. Shade alone can reduce overall exposure to UV radiation by about 75 percent, and when used in conjunction with sun protective clothing, hats, sunglasses and sunscreen – shade enables maximum sun protection to be achieved.'¹

It is important that shade is provided to reduce exposure to solar UV radiation at effective times of the day and year. For example shade should generally be provided from the east for morning use, overhead for midday use in summer and from the west for afternoon use.

Even when shaded from direct sunlight, people can still be exposed to considerable indirect UV radiation reflected from surfaces such as buildings, paved areas, sand and water.

2.1.2. Promote walking and healthy active lifestyles

The public realm plays an important role in the community's mental and physical health and wellbeing by providing opportunities for people to socialise, participate in active recreation, walk, play, recover from illness, and to come in contact with nature. Shade is an important feature in creating inviting, cool and comfortable outdoor places that encourage walking and healthy active lifestyles.

2.1.3. Reducing urban heat island

The urban heat island effect is the localised increase in air and surface temperatures in urban areas due to the extent of non-porous surfaces that absorb heat during the day and then radiate heat during the evening. This results in longer sustained periods of heat, particularly during the late afternoon and evening and especially during heatwaves. This has significant impacts on human health and comfort, particularly those members of the community who are more vulnerable to extreme heat such as the elderly, very young children, those who are socio-economically disadvantaged, those living in public housing and those who require assistance such as the disabled or chronically ill.^{2 3}

Boroondara's shade trees play an important role in cooling the city during hot periods and helping to mitigate the impacts of the urban heat island effect by reflecting sunlight, releasing moisture into the air and providing shade. Shade provided by trees on hot days can help reduce ambient temperatures by up to two degrees Celsius² and surface temperatures by up to 20 degrees Celsius⁴. This reduces the community's exposure to hotter temperatures and associated heat related illness.

¹ SunSmart Shade Policy Framework Background Information, October 2015, Cancer Council Victoria and VicHealth

² Boroondara Open Space Strategy 2013

³ Loughnan ME, Tapper NJ, Phan T, Lynch K and McInnes JA, (2013). A spatial vulnerability analysis of urban populations during extreme heat events in Australian capital cities, National Climate Change Adaptation Research Facility, Gold Coast, 128 pp.

⁴ Norton, B., Bosomworth K, Coutts A, Williams N, Livesley S, Trundle A, Harris R, McEvoy D (2013). Planning for a Cooler Future: Green Infrastructure to Reduce Urban Heat, Victorian Centre for Climate Change Adaptation Research.

2.2. Use of shade

How the community uses a space, and the type of user, will help inform the nature and extent of shade provided.

Facilities such as playgrounds that attract younger children and are designed for use by children with mobility issues will have higher requirements for shade. Some types of play spaces will also need special consideration for shade. For example sand pits, where children are particularly prone to exposure both from direct sunlight as well as indirect UV radiation reflected from the sand and often remain in one location for extended periods. Larger playgrounds (such as Regional playgrounds like Hays Paddock) will also attract greater numbers of children for longer times, thereby increasing their potential for exposure to harmful UV radiation. These facilities may require a greater consideration for the provision of shade than other comparatively less exposed or shorter visit places.

Shade can encourage physical activity and sustainable transport by making public space, and walking and cycling routes more comfortable and inviting. Shade is particularly important for older people, people with disabilities, parents with prams and young children. Walking trips by these users can often take longer which can increase exposure to heat and UV radiation, and in some cases these users have limited transport alternatives (such as cars).

Natural tree shade in Booroondara's strip shopping centres can encourage more visitors and longer stays resulting in increased retail activity⁵. Shade can also be used to activate Boroondara's main streets and civic spaces and to create places where people can be encouraged to pause, meet, socialise and engage with technology (eg Wi-Fi).

It is recognised that it is impractical and undesirable to shade all outdoor spaces. Public open spaces should seek to provide a diversity of experience and opportunity for the community to go outdoors and be active, including those with Vitamin D deficiency. For example providing a mix of both shaded and unshaded park seating will attract use in both warmer and cooler weather and encourage people into open space.

It can be difficult to contain children and adults to shaded areas when running, playing and participating in active play and sport. It is therefore important that the community also take personal measures to reduce their exposure to sun, such as wearing protective clothing, hats, sunscreen and sunglasses.

⁵ Wolf, K. L. (2005). 'Business district streetscapes, trees and consumer response.' *Journal of Forestry* 103 (8): 396-400.

2.3. Types of Shade

Shade can be natural (such as vegetation and canopy trees) or built structures (canopies, pergolas, verandahs, picnic shelters, rotundas, shade sails etc). Shade can also be 'borrowed' from buildings, structures and vegetation on surrounding properties.

2.3.1. Natural shade

Boroondara is named from an Aboriginal word meaning "where the ground is thickly shaded"⁶ and the city is renowned for its leafy treed streets and open spaces.

Canopy shade trees are an important part of the identity, appeal and valued character of Boroondara. They also deliver a number of other environmental and community health and well-being benefits including carbon sequestration; providing habitat; linking biodiversity sites; reducing air, soil and water pollution; and creating cool⁷, shaded and comfortable environments. Trees also offer children the opportunity to connect with nature, have sensory experiences and to play with natural materials. However trees can be slow to grow and develop an effective shade canopy and when young they can be prone to vandalism. It is acknowledged that there are risks associated with tree planting in active use areas i.e. playgrounds. These risks will be addressed through careful planning and design, including consideration of Crime Prevention Through Environmental Design principles. Appropriate species selection and proactive tree management (such as monitoring, pruning and pest and disease control) is also required to minimise risks. Shade tree planting locations should include consideration of potential solar access to nearby buildings, and avoid blocking solar access to private solar panel installations where possible. Vegetation such as tall shrubs and climbing plants can also be useful for providing shade where clear lines of sight do not need to be maintained. The choice of tree species and vegetation type will differ for each site. Deciduous trees can be used to provide shade in summer and to allow sun in winter. Lightly foliated evergreen trees, such as some of the Eucalypts, can provide dappled sun and shade throughout the year.

2.3.2. Built shade

Built (or constructed) shade can be stand-alone or it can be incorporated into buildings or structures.

While built shade structures may not always be as attractive as natural shade they have some advantages such as providing instant UV protection (when compared to trees that take time to grow), cast more predictable shadow, and provide cover from rain.

The use of built shade should be considered carefully as *'the sense of open space without the clutter of built form and infrastructure is highly valued by the community.'*⁸ Built shade is also more expensive compared with natural shade. There is the initial expense to install structures, as well as ongoing costs associated with maintenance, vandalism, graffiti and the renewal of the structure when it has reached the end of its life.

Retrofitting built shade structures into existing facilities can be challenging as there needs to be adequate space to achieve the required off-set distances (of posts and footings) from play equipment, bicycle paths etc. to meet standards.

⁶ Boroondara is named from an Aboriginal word meaning 'where the ground is thickly shaded' (Boroondara Arts Plan). The parish name was translated from the Woiwurrung by Hoddle as 'where the ground is thickly shaded' (Cultural Heritage Policy).

⁷ By reducing the Urban Heat Island Effect (that is, the build-up of heat in hard surfaces during periods of hot weather) (Silva 2010, Rozenzweig 2009, Gober 2010, Adams Smith 2014, GHD, 2011)

⁸ Boroondara Open Space Strategy 2013

Playgrounds can also have small roofs that are part of a multi-unit play structure. These multi-unit play roofs generally only offer minor shade benefit over parts of the playground equipment.

2.4. Policy environment

There is greater awareness of the benefits of shade, along with increased pressure on the city's outdoor public spaces, and hotter and drier weather conditions. This has led to increased community demand for shade, in particular for the provision of shade within playgrounds and the planting of shade trees⁹.

2.5 Policy context

This Policy was informed by the following documents:

- Vic Health Protecting Victorians from skin cancer – Local government action guide no. 10 November 2012
- Shade: A Resource for Local Government, Municipal Association of Victoria
- Shade Design for Public Places, Municipal Association of Victoria
- Cancer Council Victoria Sun Smart Shade Policy Framework for Local Government and Shade Policy Background Information October 2015
- Boroondara Open Space Strategy 2013 and Technical Report, adopted 2013
- Playgrounds Development Strategy 2005
- Integrated Water Management Strategy 2014-2024
- Active Boroondara 2010
- Preparing for climate change in the City of Boroondara Summary Report 2009

3. Policy statement

The City of Boroondara is committed to improving the safety, comfort and appearance of the city's public spaces and ensuring the level of service is appropriate to the place. This includes the provision of shade measures along with other sun protection strategies to encourage healthy active lifestyles in comfortable, cool, shaded spaces.

We will achieve this by:

- Prioritising the use of natural shade in open space (above that of built shade) as a long term shade solution.
- Prioritising the use of shade at selected key assets and places including:
 - playgrounds
 - along key walking and cycling routes
 - encourage Traffic and Transport to nominate specific public transport stop shelters to Public Transport Victorias annual program for their consideration and implementation
 - other facilities and places where a particular need has been identified.
- Encouraging community members to participate in outdoor activities more safely by using personal sun protection measures.

⁹ Summary of the household survey undertaken in July 2010 as part of the Boroondara Open Space Strategy 2013

3.1. Guiding principles

3.1.1. Prioritise the use of natural shade in open space (above that of built shade) as a long term shade solution to reduce costs and maximise environmental and community health and well-being benefits.

- Prioritise the use of trees to provide shade in open space as a long term shade solution to minimise the impacts of built structures.
- Plant additional trees when upgrading open space to increase shade where needed.
- Plan ahead and plant additional trees on routes into and around key park destinations, and around the periphery of sports grounds (ensuring any tree planting does not impact on existing or future planned use of the open space).
- Encourage planting of appropriate large canopy shade trees where possible in open space located in and near higher density urban areas, particularly activity centres.
- Locate and design Council facilities in open space (such as pavilions and playgrounds) to take advantage of existing site shade where appropriate to minimise the need for additional built shade structures.

3.1.2. Prioritise the use of shade at playgrounds.

- For **Regional Playgrounds** use natural shade from existing trees where possible. Where adequate natural shade cannot be achieved in the short term, then built shade will be considered as a permanent long term shade solution.
- For the design of new or the upgrade of existing **District Playgrounds** use natural shade from existing trees where possible. Where adequate natural shade cover cannot be achieved in the short term, then built shade may be considered when upgrading the playground. In such circumstances *built shade solutions will be an interim shade solution only until the natural shade from trees becomes effective, at which time the built shade structure may be considered for removal.*
- For the design of new or the upgrade of existing **Local and Pocket Playgrounds** make use of roofs on multi-unit play structures, shade from existing trees where possible, and incorporate new tree planting where possible.
- Incorporate built shade into **sandpits**
- Provide roofed picnic shelter/s at all **Regional Playground** sites.
- Provide roofed picnic shelters at some **District Playgrounds**, and ensure there is an equitable spread across the municipality of District Playgrounds with picnic shelters.

3.1.3. Prioritise the use of natural shade along key walking and cycling routes.

- Utilise natural shade to encourage physical activity and sustainable transport by making key walking¹⁰ and cycling routes more inviting and shaded.

¹⁰ Key walking routes are identified as Principal Pedestrian Networks (PPNs) which are designated high priority pedestrians walking routes using methodology developed by the Victorian Government Department of Economic Development, Jobs, Transport and Resources.

3.1.4. **Prioritise the use of shade at facilities and places where a particular need has been identified.**

- Prioritise tree planting and tree renewal in areas where more vulnerable members of the community are concentrated.¹¹
- Provide shade where possible to BBQs and picnic tables, making use of shade from existing trees and incorporate new tree planting.
- At new **Skate Parks** and **Junior Play Spaces**, where there is a lack of peripheral shade, provide roofed shelter/s nearby the skateable/active areas to create shaded social spaces. (Note - shade will not be provided over skate facilities).
- Provide shade at sites where a particular need for built and/or natural shade has been identified during the development of a master plan or landscape concept plan.
- Incorporate tree planting where possible when upgrading carparks, shopping centre streetscapes and civic spaces to provide shade as well as other amenity, environmental and health and well-being benefits.

3.1.5. **Encourage community members to participate in outdoor activities safely.**

- Encourage community members to adopt personal sun protection practices for themselves and others in their care.

4. Implementation and monitoring

4.1. Accountabilities

For all queries or feedback regarding this policy, please use the contact details for the responsible department below.

Contact Department	Contact number	Contact email
Environment and Sustainable Living	9278 4060	environment@boroondara.vic.gov.au

4.2. Implementation

Implementation of this policy is to be progressive and ongoing. Implementation activities are planned to be rolled out in conjunction with other programmed renewal and operational works, along with one off capital works projects at key assets.

Key departments have a role to play in the provision of sustainable, quality shade for all Council outdoor facilities and spaces. In particular Environment and Sustainable Living, Projects and Strategy, Parks and Infrastructure, and Traffic and Transport have responsibilities for ensuring compliance with this Policy.

4.3. Financial Implications

The provision of natural shade and built shade (in circumstances where natural shade cannot be adequately provided) will require funding for implementation, monitoring, on-going maintenance and renewal. These costs will need to be considered when budget planning, scoping, design and planning for new projects, and also as part of the renewal of existing assets.

¹¹ Areas where vulnerable people are concentrated can be determined through the Socio-Economic Indexes for Areas (SEIFA) developed by the Australian Bureau of Statistics using Census data, and also by considering areas where younger children congregate such as playgrounds.

5. Definitions

Junior Play Space	A play space typically aimed at tween and teens to stimulate play, fun and social interaction. These spaces could include parkour equipment, informal play/skate opportunities, climbing frames, climbing walls etc.
Playground, Regional	Large all-age playgrounds that attract visitors from across the municipality and beyond. These playgrounds offer a larger range of activities than a District or Local Playground. Visits to these sites can be for a number of hours, and a range of amenities will be required to provide for these longer visits. Council has two Regional playgrounds at Markham Victory Reserve and Hays Paddock, and one planned at Victoria Park.
Playground, District	Playgrounds that are used by families and children who visit these sites from further afield, usually travelling by car. The play activities at these playgrounds generally attract longer visits than Local Playgrounds and cater for all age groups. They are generally located in parks or reserves where there are other attractions and activities i.e. the playground is not the primary function of the open space. Council has 21 District Playgrounds.
Playground, Local	Playgrounds that cater for local residents, are within walking and cycling distance from their homes, and are unlikely to attract visitors who do not live in the area. Visits to Local Playgrounds are generally shorter. Sites for Local Playgrounds are likely to be smaller than for other parks. Council has 66 Local Playgrounds.
Playground, Pocket	Playgrounds located on very small reserves which are typically not large enough to provide a full range of social and recreational functions of a full size park or playground. Often these playgrounds include a single swing, or a pair of rockers/spring animals. They cater mainly for local residents, within walking and cycling distance of their homes, and usually offer, at best, the opportunity of a quick swing en route to somewhere else. Council has 15 Pocket Playgrounds.
Public realm	All public open space owned and managed by Council, along with Council managed public land, between buildings and including streets, which is available for use by everyone on an unrestricted basis, regardless of ownership.
Public open space	Land that is set aside for public recreation or public resort; or as parklands; or for similar purposes (including parks, gardens reserves, waterways, civic forecourts and plazas) as identified in the Boroondara Open Space Strategy.
Shade	Comparative darkness and coolness caused by shelter from direct sunlight.
Structured sport and recreation	An activity that is organised by a club, association, school or community group and participation requires becoming a member of the club or on a fee paying basis.
Unstructured recreation	An activity that is initiated by individuals and not organised by a club or other group.
Urban heat island	The localised increase in temperatures in urban areas compared to the surrounding rural countryside, often by several degrees.